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FIREMEN

SIXTY-SECOND YEAR • NATIONAL FIRE PROTECTION ASSOCIATION

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(See pages 18 and 19)

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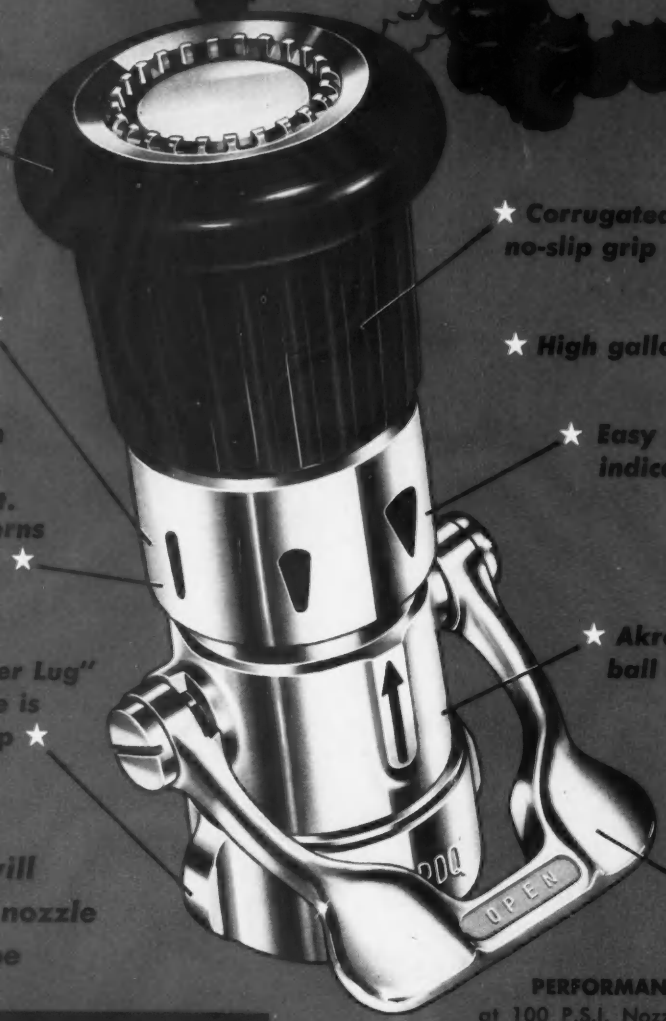

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at 100 P.S.I. Nozzle Pressure

STYLE	SIZE	GPM	LIST PRICE PB	LIST PRICE CP
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1218	1½"	95	72.00	76.50
1219	1½"	125	72.00	76.50
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JACKET—A combination of high-tensile fibres of outstanding strength, woven by a special process, assuring highest resistance to pressure, wear, weather and rough handling. Size-for-size, "Fire-Flex" pressure-resistance is equal or superior to the heavier and stiffer conventional cotton jackets, despite its much lighter weight. The tightly woven fabric is virtually snagproof, and is treated to resist mildew.

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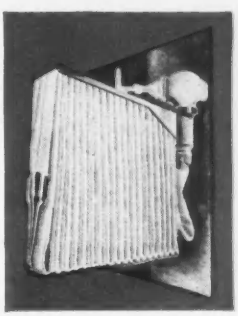

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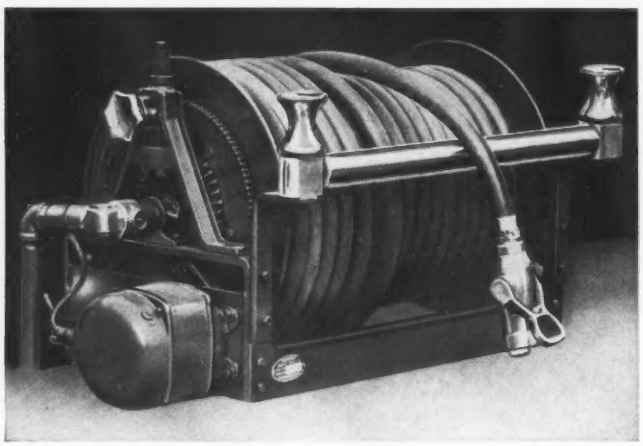

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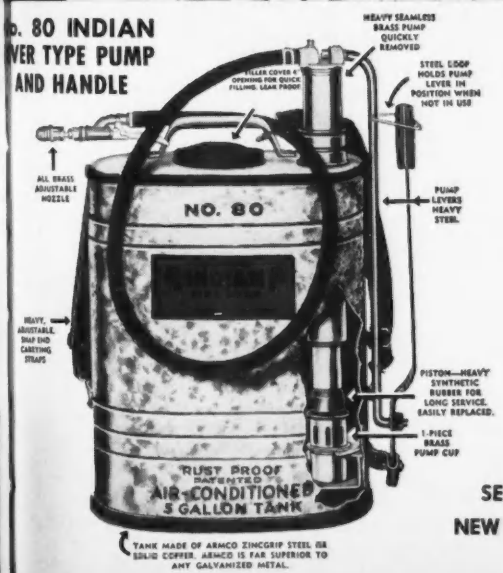
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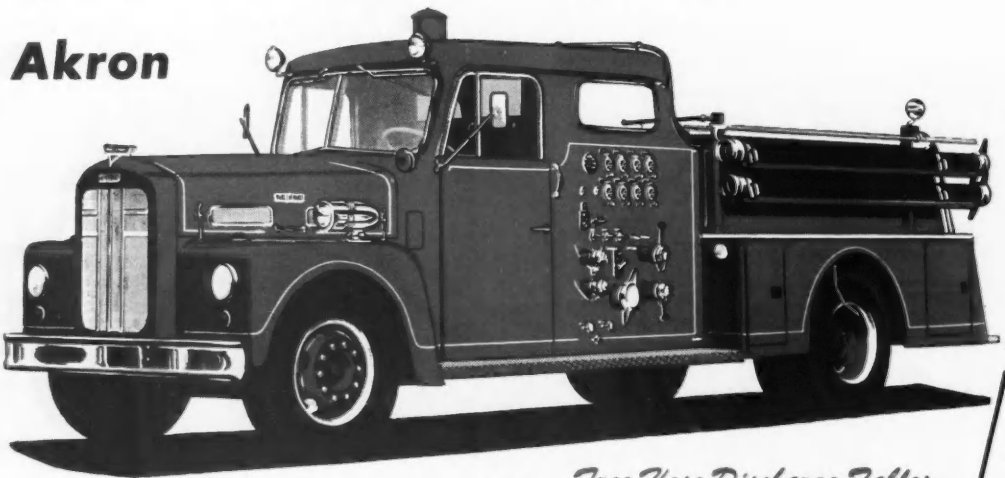
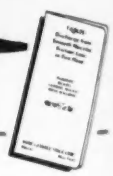
for Akron



Model 1120T Seven-man Canopy Cab (rear entrance) with new Waterous Electro-Matic CM-1000 G.P.M. pump delivered to Chief Gerald Vernotzy for the Akron, Ohio, Fire Department. Ward La France Representative: Stanley R. Smith Co., 1200 West Ninth St., Cleveland.



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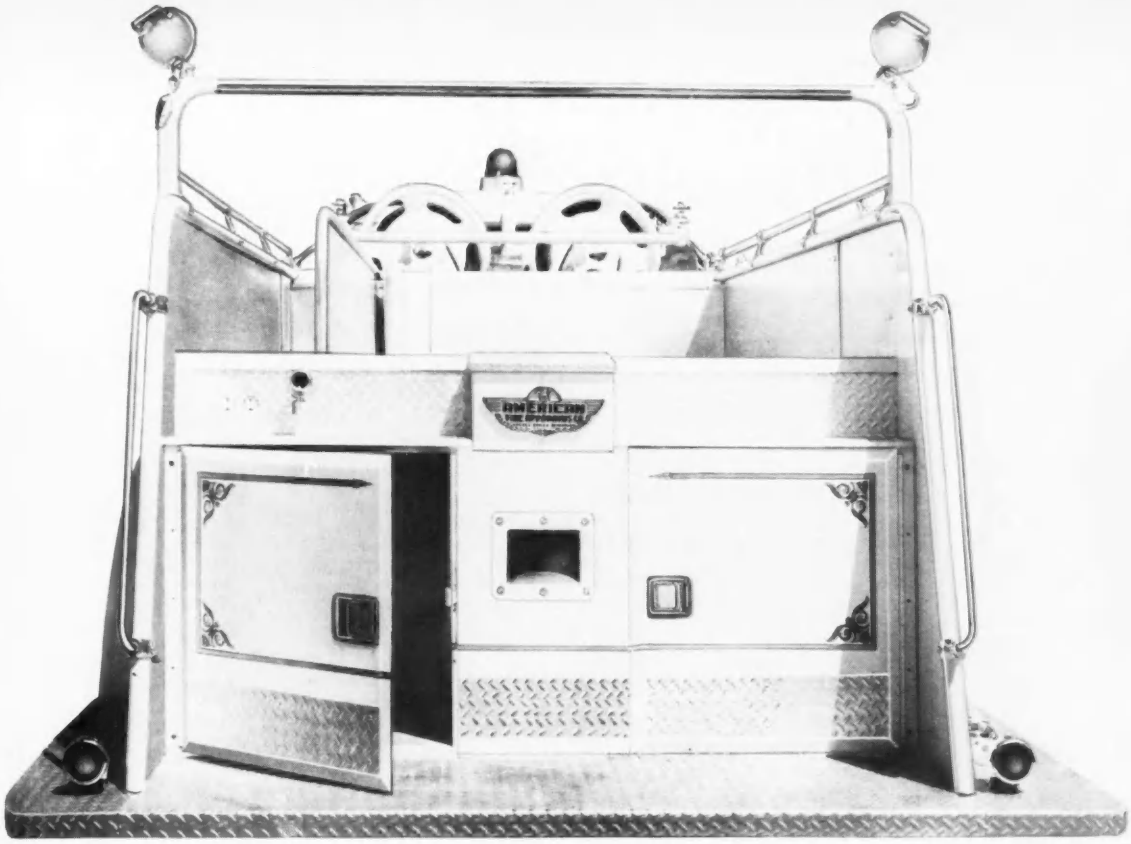

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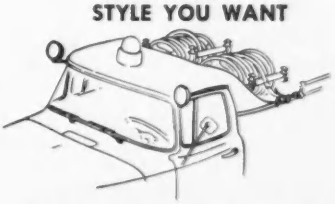

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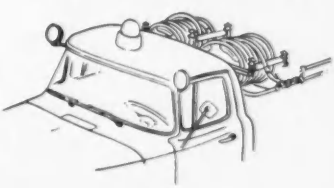
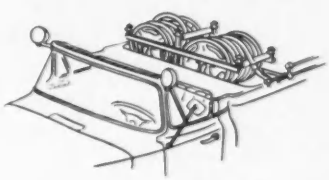


STANDARD DELUXE BODY



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Firemen

Volume 24 — Number 5

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Published monthly for the fire service members of the
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A VOLUNTARY NON-PROFIT ORGANIZATION
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NFPA Annual Meeting

By spending only time, fire fighters on the West Coast can take part in one of the most interesting and informative conferences of their fire service experience when the NFPA 61st Annual Meeting takes place in the Hotel Statler, Los Angeles, California, May 20–24. As shown in the tentative program, published in the April issue of NFPA *Fire News*, the five days will feature a wealth of information and activity for anyone interested in fire control, fire protection and fire prevention.

Chiefs of the Los Angeles, Los Angeles County, Santa Monica and Pasadena Fire Departments have taken command of a number of arrangements for the meeting. (See pages 18 and 19.) At least twelve fire officers will appear as featured speakers on the program, in addition to State and Provincial fire marshals, fire protection engineers and other engineering and technical specialists. An outline of the program was included on page 9 of the April issue of FIREMEN magazine. There will be five General Sessions, a meeting of the Fire Marshals' Section, the Electrical Section, and an Aviation Seminar.

Many NFPA technical standards which have been revised during the past year will be proposed for adoption. Two of particular interest to fire department members will be reported by Committee chairmen on Tuesday afternoon, May 21. Chief Henry G. Thomas of Hartford, Connecticut, will report on Standard No. 19 — "Specifications for Motor Fire Apparatus," and Chief Albert W. Kimball of Hingham, Massachusetts will report on Standard No. 198 — "Care of Fire Hose." Both of these standards have been revised extensively because of fire service demand for new specifications and recommendations on this equipment.

Firemen in uniform will be admitted at no charge, while other persons attending will pay a registration fee of $10 for the five days, or $5 for a single day's sessions. Nominal charges will be made for attending the many entertainment features of the program.

Complete programs and other information may be picked up during the meeting at the NFPA Registration Desk on the ballroom floor of the Hotel Statler.

End of a Fire Patrol

One by one the underwriters' "fire patrols" or salvage corps, formed many years ago in various large cities, are being closed or consolidated with the public fire department. This is in recognition of the fact that reduction of water damage at fires is a public concern and is usually handled by the fire department. Nevertheless, the underwriters' fire patrols have saved perhaps millions of dollars worth of stock and other property in the past one hundred years.

Latest of these organizations to consolidate with the public fire department was the Kansas City (Missouri) Fire Patrol. All the buildings, apparatus, salvage covers, fixtures and furniture used by the Patrol were sold to the City for $2.00. About 20 percent of the men are now City employees. The rest, including Fire Patrol Chief William H. Gardner, were placed on retirement. Those over 65 are getting Social Security as well.

Only a few of the larger cities, including New York, Chicago, Philadelphia, Baltimore and Boston, where serious fires are frequent, still maintain an underwriters' patrol or salvage corps. Many other large cities now operate separate salvage companies as part of the fire departments.

All modern fire departments are rightly concerned about salvage methods to reduce water damage at fires. It is encouraging to hear from experienced fire salvage corps officers that the widespread use of 1½-in. fog nozzles has brought noticeable improvement in the fire salvage problem, as compared with former days when only 2½-in. solid streams were used in fire attack.

Cover Photo

Philadelphia, Pennsylvania fire fighters shown climbing to attack fire in a 5-story brick, wood-framed warehouse in the City's waterfront section on March 31. (*United Press photo.*)

Fire fighters reach two women "saved" by police, while men running line find unconscious patrolman on fire escape.

Seconds later, fire fighters take down unconscious officer as line is charged. Woman is assisted down fire ladder at right.

Fire Fighters Save Cops!

PROPONENTS of fire-police department integration usually suggest that police in patrol cars, "assisted by the dog catcher," can handle "approximately 90 percent of all fires with two extinguishers carried in the cars," and that "police frequently discover fires and save the occupants before fire fighters arrive."

Most members of fire departments have read newspaper accounts of cases where brothers in blue in the law enforcement department have purportedly made outstanding fire rescues. Without attempting to take any deserved credit from police officers, who are equally heroic and are among the best friends of the fire fighter, these reports usually may be traced to the fact that in most communities the fire news is handled by "police reporters." During many fires the police are out in the street talking to reporters while the fire fighters are battling the flames.

Recently, a large city newspaper carried a headline: "Heroic Cops Save Seven in Blaze." The above photographs show pretty clearly what actually happened. Two police officers from a prowl car did make a heroic attempt, but they were overcome by heat and smoke and had to be rescued by fire fighters.

All photos by John Landers, Jr.

Fire fighters help down another gasping woman "rescued" by police.

Two of the women the police are reported to have saved are shown being rescued from an upper window by firemen over a fire ladder. Other rescues made by firemen from inside the burning building are not shown.

Also, the police parked their car in front of the nearest hydrant and delayed the first pumper in getting water on what turned out to be a three-alarm blaze.

Our purpose in reporting this, is not to belittle the police, but to attack a dangerous spreading fallacy that one or two policemen, or anybody else without proper training and fire fighting equipment, can handle dangerous fire rescues. In fact, all too often the would-be rescuers are incapacitated and have to be rescued. Fires are extremely dangerous and they took almost 11,000 lives in the United States last year.

NFPA General Manager Percy Bugbee has pointed out in writing, that to our knowledge no responsible leader of the fire service has advocated police-fire integration. It is

merely a theory advocated by persons without professional fire fighting experience, and interested in cutting the municipal budget.

These pictures are typical of hundreds of fire rescues made by fire fighters each year. They were taken at an early morning fire by a free-lance photographer who chanced to be nearby with a fire radio in his car. Thousands of equally heroic fire rescues go unheralded, or "wayward press" reports that police officers carried out the occupants go unchallenged.

These pictures are important because they show the chief ingredients that go into most successful fire rescues:

1. Skill and knowledge about fire behavior and how to work in smoke and heat.

2. Fire company teamwork designed to protect the rescuers and those they are attempting to save.

3. Charged hose lines necessary to hold the fire at bay and protect the avenues of escape including stairways and fire escapes.

4. Adequate ladder equipment to reach quickly all places where persons are endangered and men with the skill and teamwork to raise them in seconds.

5. Prompt ventilation to relieve heat and smoke to permit both rescues and those trapped to live inside the building. (Note the truckman on the aerial taking out the windows.)

6. Adequate masks and breathing apparatus and persons experienced in their use. (Note that some of the men making rescues have masks on their coats ready to don as needed.)

7. Floodlights adequate to quickly light up the scene. This means large capacity lighting equipment immediately available on first alarm apparatus as lights are often vital in rescues. Also most of the fire fighters are wearing an individual light on their belts. Also fire clothing and helmets are marked with reflective material essential in dark smoke-filled areas.

8. Ropes, jumping nets and other auxiliary rescue items available on the apparatus, together with inhalators and resuscitators and an adequate number of men with advanced first aid training. (One or two men are seldom enough for serious fire rescues.)

9. Over-all command and operational procedures to guarantee that all areas at front and rear, and all floors, are searched quickly and adequately and covered for both rescue and fire fighting. This is why two men in a patrol car with extinguishers are almost never enough for serious rescue work. It takes engine and ladder crews at both front and rear. Frequently occupants of adjoining buildings are in danger or are in such fear due to smoke that they might also jump. (Recently, a noted musician died in a headlong leap from a burning building. If he had closed the door to the room and waited at the window a few seconds he might have been saved.)

10. Last but not least is the provision of protective clothing designed for fire fighting which permits the trained fire fighter to take more punishment and work under severe conditions which would stop other persons not so trained and equipped.

STATISTICS of many communities show that a very small percentage of fires is discovered by police patrol car crews. It must be remembered that, in all too many cities, for reasons of economy, only one man rides the patrol car. He would be almost helpless against a severe fire except to give an alarm.

When fires are discovered by police, the first duty of the officer is to give a proper alarm of fire to the fire department. This should include a report of the correct location and what appears to be burning. If there is any special feature about the location of the fire this should be reported, also. Next it would be the duty of the police to arouse any sleeping occupants using such warning devices as may be available on the property and the police siren. Another major responsibility of the police is to see that all traffic is kept out of the way of the fire apparatus. Vehicles should be kept out of streets at front and rear of the burning building and not be allowed to block hydrants, driveways and alleyways that may be used by firemen.

One of the complaints frequently voiced by fire officers, when fires have been discovered by police, is that the patrolmen all too often run through the structure leaving doors open. This permits the fire to spread seriously before the arrival of the fire apparatus.

It may be that, just as fire fighters are instructed in how to preserve evidence of suspicious fires for the police and how to make proper court appearance, so the police should be adequately instructed as to their proper supporting role at a fire. This will permit them to render maximum help to the fire service and should protect the police officers from becoming casualties in the dangerous business of making fire rescues.

"333 Questions and Answers"

THE 1957 revised edition of an informative, easy-to-read 64-page book titled "333 Questions and Answers for Firemen" has been published. Prepared by the firemanship training staff of Engineering Extension, Iowa State College, the 6 by 9 in. paper-covered book contains a selection of questions and answers on topics of interest and importance to many fire fighters. It was edited by Keith Royer, Supervisor of the staff, assisted by Field Instructors F. W. Nelson, W. R. Simpson, and J. D. Peterson.

It is divided into ten chapters which cover fire department organization and operation, comburology (the science of burning), fog application, first aid extinguishers, fire fighting practices, personal protection, water supplies, fire pumps, fire streams, and inspection and fire prevention.

Copies of the book may be purchased for 50 cents each from Engineering Extension, Iowa State College, Ames, Iowa.

Also available from the College is a new 16 mm., 9-minute black and white motion film on television tube implosions. It is priced at $35.00 including print, reel, can and prepaid shipping charges.

Ansul Training School

THE Ansul Chemical Company of Marinette, Wisconsin, has announced that its eleventh fire fighting school is scheduled to be held at the Company's 10-acre proving ground in Marinette beginning May 20. A series of twelve 3-day courses will extend through the summer, with the final session scheduled to begin September 30.

Courses are open to industrial plant safety personnel, municipal and military fire fighters, fire marshals, and other interested persons. Students may also present their special fire protection problems for discussion.

Classes will be limited to 25 men. Reservations may be made on a first-come, first-served basis through Ansul salesmen and distributors or by writing to the Company at Marinette, Wisconsin. The three-day classes begin on May 20, June 10, 17 and 24; July 8, 15, and 29; August 12, 19, and 26; and September 16 and 30.

BUYING A RESUSCITATOR?

By Lewis H. Lambert, M.D.

As shown at left, fire department and rescue squad personnel frequently handle situations where a person's life depends upon skillful application of manual artificial respiration, or upon quick and proper use of equipment to aid breathing. In this article Dr. Lewis H. Lambert, Staff Anesthesiologist of the Hitchcock Clinic of Hanover, New Hampshire, and a member of the Hanover Volunteer Fire Department, describes some of the important factors he believes should be considered when buying a resuscitator for a fire department.

COMPETENT medical authorities agree that to date the perfect mechanical resuscitator has not been produced. Some machines appear to be better than others. In general, however, no apparatus on the market will do away with the need for the knowledge and application of well-managed manual artificial resuscitation according to the teachings of the American Red Cross. This knowledge is fundamental, and consideration of purchase of a resuscitator should be forgotten until manual techniques are fully mastered and understood.

However, there are some advantages to the use of a mechanical resuscitator when it is properly employed. To name a few: 100 percent oxygen atmosphere, regularity of rhythm, less fatigue for operator, and a means of resuscitating when bodily injury, particularly of the upper trunk and arms, is present.

There are many types and makes of resuscitators on the market, and it is not the purpose of this discussion to argue the pros and cons of any one or all of the machines available. Most machines for emergency use (that is, the resuscitative problem brought about by accidental means which Rescue Squads would be apt to encounter) are either of the positive-negative ("push-pull") or intermittent positive pressure type. The former type provides a negative pressure during exhalation in order to "suck" or "pull" the gases out of the lungs. The latter relies on the elastic recoil of the lungs to cause exhalation. Each type has advantages and disadvantages, but both are fairly satisfactory.

A third general type of resuscitator which has appeared recently is a stimulator that is designed to deliver an electrical stimulus to the muscles of breathing, causing contraction of chest cage and diaphragm and consequent contraction of lungs. Upon release of stimulus, the chest cage returns to normal position with a consequent intake of air. These machines appear to have rather limited and specific uses and are not recommended for use as emergency equipment for the layman groups.

In the "push-pull" and intermittent positive pressure type of resuscitator, energy for operation is derived from cylinders of compressed oxygen. The range of operating pressures and cycling in the machine is regulated by calibrated valves or spring mechanisms usually set at the factory. These mechanisms work quite well — but remember, *they are mechanisms* and mechanisms do get "out of whack." Therefore, periodic checks are in order.

Having fulfilled the absolute requirement of good First Aid and manual resuscitation training, your department may then decide to purchase a mechanical resuscitator. It usually isn't necessary to seek a supplier because, in most instances, several salesmen have already knocked at your door. Not only are they eager to sell you a machine, but they are glad to provide suggestions and material to help you raise the necessary cash. Before you succumb to the glowing accounts and terms of the salesmen, consider these factors.

What are other fire departments in the area using for equipment? Has their experience included the machine you have in mind? The bigger cities, by and large, have had the greatest use of mechanical resuscitators and are in a position to advise you with regard to problems arising with the use of this equipment. Take the time to explore some of these departments by correspondence or through a personal visit. See a machine in operation and operate it yourself without the salesman hovering in the background. Find out if the instrument can "take it," or is out of order frequently. Some of your community physicians may be able to help you in your selection, and later, perhaps, in your training.

Don't be impressed by the number of gadgets mounted on a resuscitator. The more reliable and popular makes are fairly simple in construction and are not cluttered with many valves, petcocks, gauges, adjustments, etc. Such gadgets are not necessary and merely over-complicate a critically complicated situation.

Don't hesitate to ask for the machine of your choice on a "trial" basis. Any reputable manufacturer or supplier is usually glad to have his equipment used on trial. Be suspicious of the seller who wants the deal signed, sealed, and delivered before he lets his product out of sight. Of course, you have an obligation, too, to keep the machine in good condition, to try it out with your men, and to be prepared to report on your experience within a reasonable length of time.

When you decide to buy a resuscitator, maintenance service should be an important consideration. Is there a repair facility nearby? What degree of rapidity of service can you expect? Will the company provide stand-by equipment if time of repair is going to be considerable?

These are all fair questions and should be factors in your selection. Somewhat in the same vein is the question of instruction. Try to make arrangements for the company representative to stop in every so often and verify your operation of the machine. This also gives him a chance to go over the resuscitator and make sure it is functioning satisfactorily.

Many of these machines can be set up to operate for two and three resuscitation patients. Perhaps if you are in a community where multiple drownings or asphyxiation is a distinct possibility, such as a resort or chemical manufacturing area, then you may want one or two extra supplemental units for your machine, although these are expensive.

One piece of equipment that ought to be standard for any resuscitator is a connection that allows you to use oxygen tanks from welding equipment, garages, plumbing shops. This, in most cases, is an "extra" but is indeed a very valuable one. Sometimes the ability to secure and connect to commercial oxygen facilities will be a great help.

It is well to ask your dealer about oxygen refills for the machine. You don't necessarily have to use the brand of oxygen that comes with the resuscitator. It may be that there is a supplier of medical gases in your town, or one who travels in your neighborhood and can provide doorstep delivery. This is far more satisfactory than sending tanks back and forth by freight. Your community hospital may be able to help you in finding a good oxygen supply service.

What about prices? These vary, and it is hard to say where to draw the line. Beware the real "bargain" — it may let you down. A resuscitator is a highly precisioned instrument and costs money. Again, don't hesitate to check other departments nearby or medical supply houses for comparative prices.

Remember — your department will not stand or fall because it does or doesn't have a mechanical resuscitator. If you feel that there is a justified need for one, there are many good machines on the market. But remember, a resuscitator is only a machine. It is only an *adjunct* to basic first aid and resuscitative knowledge. But when you purchase a resuscitator review your training continually, so that your rescue procedure will be automatic and effective whenever it is needed.

German Studies of Water Spray Streams

A COMPREHENSIVE study of water spray streams has been reported in German and can be recommended as an excellent text for persons concerned with this subject who can handle technical material in that language. Members interested should write to the publishers, Westdeutscher Verlag, Koln und Opladen, at Ophovener Strasse 1-3, Opladen, Germany, and ask for the publication "Wasserzerstaubung im Strahlrohr" ("Water Spray Streams"). This is a book approximately 8¼ by 11⅝ inches, 90 pages with paper cover and can be purchased for 18.65 Deutschmarks (about $4.50). Deutschmarks can be sent by international postal money order.

This book represents work done under the auspices of the Research Laboratory for Fire Extinguishment of the Technical University of Karlsruhe in Germany of which Doctor-Engineer G. Magnus is director. Dr. Magnus is also chief of the fire department of the German city of Mannheim and an NFPA member. The authors of the report are Dipl.-Ing. (Graduate Engineer) Arnold Kruger of Karlsruhe and Feuerwehringenieur (Fire Department Engineer) Rudolph Radusch of Dortmund. The book is issued as a Research Report of the Economic and Commerce Ministries of the German state of North Rhine-Westphalia (Report No. 329).

By the bibliography which the authors present with the report, they establish the fact that they have reviewed the most competent work which has been done on this subject, not only in Germany, but in England, the United States and other parts of the world. The report was made to advise German fire departments on factors of importance in the design of water spray nozzles and related equipment.

The burden of the report is that it is possible to design a spray nozzle to produce a good fire extinguishing effect and adequate range within the limits of pump pressures customarily available in fire departments. One fact reported should make red faces among the manufacturers of many of the spray nozzles now being offered for fire department use throughout the world. The authors conclude that *it is not necessary to use any substantial proportion of the energy of a fire stream to break the water into a satisfactory spray.* For this, most present nozzle designs waste large percentages of the pressure delivered to the nozzle.

Undoubtedly, this report will favorably influence the design of portable fog nozzles. It can be recommended as the best summarization published to date of the considerations which affect good water spray stream design. It gives mathematical calculations and experimental results on such important factors of this problem as the most favorable size of drops in a water spray stream, spray angle and stream range.

"Head-noises been driving you nuts, huh?"

(Left) The 2500 gpm hydraulic nozzle on salvage truck blasts a powerful stream hundreds of feet into the Mississippi River during a demonstration by Memphis fire fighters. Nozzle is fed through ten 3-in. gated inlets supplied by pumpers at left.

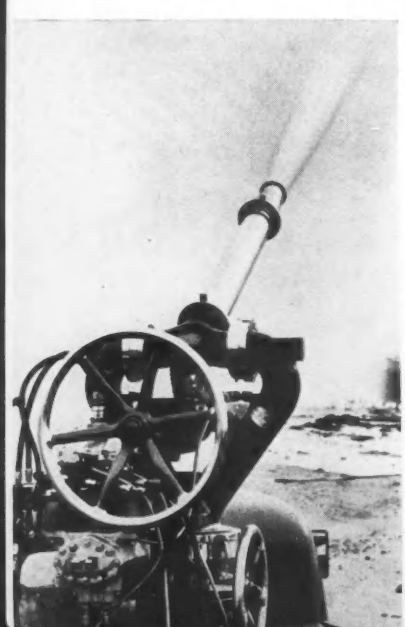
Memphis Shows Its Big Guns!

VISITORS to the recent Fire Department Instructors' Conference in Memphis, Tennessee, had the opportunity to watch the host fire department demonstrate some of its heavy stream equipment. The Memphis Fire Department, headed by Chief John C. Klinck, is particularly proud of a new hydraulic water tower and a specially equipped salvage truck featuring a hydraulic turret nozzle. (See FIREMEN for April, 1957.)

Both pieces of apparatus are shown on this page. Both require thoroughly trained personnel who will make sure that sufficient supply lines of adequate size are connected to operate the various nozzles at full capacity. The Department on occasion will drive the salvage truck into fire-involved buildings to provide a heavy barrage of water and allow effective advance of hand lines. Similarly, the water tower can be used simultaneously for direct attack on a fire and for establishing a protective water curtain for exposures.

As reported in the January through April, 1956, issues of FIREMEN magazine in the series of articles on the Memphis preplanning program, the Department makes a thorough analysis of the public and private water supplies in the key target areas. Heavy stream equipment is given prime consideration. In preplanning for the various target properties, detailed information is gathered on the location and capacity of water supply for the target building and the number and size of pumpers necessary to supply certain heavy stream appliances. (*A 12-page reprint describing the Memphis preplanning program is available from NFPA for 50 cents per copy — Ed.*)

Hydraulic water tower in operation with two Chiksan nozzles in crow's nest, McIntyre 1500 gpm mast nozzle and 1100 and 2500 gpm nozzles in truck bed.



(Left) Close-up of McIntyre hydraulic nozzle mounted on salvage truck. Also permanently mounted are 1-in. fog nozzles which are operated to protect driver and vehicle from intense heat and smoke when close to a fire.

Elkhart "Jumbo" fog nozzle attached to McIntyre gun on salvage truck.

It's Safer to Clean Out the Windows!

By Warren Y. Kimball, Manager, NFPA Fire Services Department

DURING many fires, the situation occurs when it is impossible to ventilate the involved structure from the inside because of intense heat and smoke. Accordingly, fire fighters promptly apply axes and other forcible entry tools to the windows to effect initial ventilation so that men with hand lines can get inside the building.

A man on a ladder using a plaster hook can clean out a number of windows quickly and is in less danger of being injured from glass or flame than is the man who tries to pry up or break a window with an axe. Fire conditions and experience will indicate which method to use, but it should be kept in mind that breaking of glass is the cheapest, quickest, and easiest type of ventilation to repair. A few dollars will replace window glass, but delay in breaking windows can easily lead to a major fire loss.

There are several important things to consider when breaking windows. The man doing the ventilating must know how to break glass without injury to himself. He should warn men below as necessary, for example, when he is breaking windows over a doorway through which lines are being advanced. There is likelihood of flame as the window is opened so the ventilation man must protect himself against this flame. Hose lines must be ready to cope with the fire.

As soon as practicable, the glass and any other obstruction should be cleared out of the window opening, to get the maximum effective area of ventilation for each window and to prevent injuries if fire fighters crawl through the window opening. It is more effective to break out one window clean than to punch holes in three or four without providing adequate area of ventilation in each. Drapes, curtains and interior blinds also should be removed.

When opening windows pay some attention to what is above. Generally, it is not good practice to open up directly under a ladder to an upper floor because smoke, heat, or flame may not only damage the ladder, but may block this means of escape for persons on the upper floor. The same is true about cleaning out windows on a fire escape.

One situation where a commanding officer must exercise judgment concerns the need for cleaning out plate-glass show windows or other large and costly windows, such as ornamental windows of churches. While no needless damage should be done, it is senseless to save the windows and lose the building to fire. Generally, one method of determining that this type of ventilation is needed is to attempt to reach the fire with the aid of other less costly means of ventilation.

In cleaning out show windows it is important to see that there are no inside panels or obstructions that will prevent effective movement of air when the outside glass is removed. If there is intense heat and smoke under pressure so that a smoke explosion or "back draft" is likely, men and apparatus must be kept out of the path of the possible explosion as it is not unusual for glass to be blown across a street with great force.

In such cases keep clear of the front of the building and smash the glass from the side with a long pike pole or even with a ladder. Have lines ready because there will be a hot fire.

Knowledge of construction and possible opening of show windows is also important with many basement fires. Frequently there is an open space from the basement leading under the show windows. This space may be reached from the outside and blowers used to draw the heat and smoke away from the basement stairway that must be used to attack the fire.

"Piecemeal" ventilation is evident in this photo of a dwelling which was involved by fire. Windows should be opened, removed or the glass cleaned out completely.

Cub Scout Firemen

ACCORDING to the Spring 1957 issue of the "Cub Scout Program Quarterly" published by the Boy Scouts of America, the theme for the month of May will be "Cub Scout Firemen." During this month thousands of Cub Scout packs throughout America will be giving attention to fire prevention and safe fire protection practices in the home and in the forest.

The "Quarterly" recommends that Cub Scout packs participate in home and community projects such as fire inspection, listing of fire hazards, studying fire facts and histories of fires, taking part in family escape plans, developing fire prevention posters, and other useful activities.

Also recommended is a visit to nearby fire stations, and suggestions are made to the den mothers to arrange meetings with firemen so that the Cub Scouts will be adequately instructed when they reach the fire station. NFPA member fire departments are urged to lend their support and encouragement to this worth-while fire safety education program. Some 1300 fire departments in the United States give year-round support to Scout activities through direct sponsorship of troops.

What to Do about

Industrial Plant Inspections

From a recent address by NFPA member Alan L. Kling, Director, Safety and Loss Prevention Department, American Cyanamid Company, New York City, New York.

INSPECTION of fire-protective equipment is an important duty of industrial fire brigade personnel, and one which requires adequate training to make it effective and reliable. Nowadays, industrial plant management is giving high priority to fire-protective equipment. Automatic sprinklers, water spray, inert gas flooding arrangements, mobile equipment and portable extinguishers are all accepted as a vital and essential part of manufacturing operations. They are the first line of defense against crippling fire losses, and the very heart of smooth, uninterrupted production.

Regular inspection, then, can tell whether this equipment is strong, healthy, and able to do its job effectively. Like periodic physical examinations, inspections of fire-protective equipment should reveal abnormal conditions that might cause future difficulty.

Because inspection is such a routine, day-in, day-out assignment, because it lacks the compelling urgency of an actual fire, and because there is an inclination to believe that a person with two eyes can see what he looks at, the training of inspectors too often consists of the mere diagramming of a route or tour on a plant map, and the simple instructions to "Take a look at the extinguishers" or "Check the water pressure."

Inspections, to be effective, require a great deal more preparation and training than this. The best starting point is a comprehensive, though not necessarily elaborate, training program. Psychologists and educators tell us that to achieve success in teaching any new skill or endeavor, there must be motivation. In simple terms, motivation means having an appreciation of the importance of what is being learned, and a desire to learn and become proficient.

It is relatively easy to impress an individual with the necessity for fire prevention and the importance of fire protection. The desire to do a good inspection job is not quite as easy to develop, but there are several positive factors which can be used for motivation.

First, an inspector has a minimum of supervision. The job which he does is a direct reflection on how he accepts his responsibility, and it is still generally true that when we're dealing with individuals, human nature responds to responsibility.

Second, an inspector can and should have a great deal of self-respect. He can be proud of his special job, and the part he plays in the smooth operation and uninterrupted production of the plant.

Third, an inspector has more privileges and fewer restrictions than most personnel. He has access to all areas, and consequently he knows the physical plant intimately.

Fourth, he is part of an important team. Any fire loss or job loss from failure of equipment due to poor, slipshod work will be a reflection not only on himself, but on the entire brigade or inspection group of which he is a member.

The idea of developing motivation through appreciation and desire may seem more philosophical than practical, but it is a solid foundation on which to build any training procedure.

Naturally, it is important to have capable men, personnel who are receptive to instruction and who are physically, mentally and emotionally able to learn and to do. More and more, there is the realization that it is false security to entrust a plant with the halt, the lame and the blind, or misfits from other jobs.

A training program for fire-equipment inspectors must be broad in scope and specific in detail. It should show where, explain how, and tell why. Here are the essentials of such a program:

Knowing the Plant

Inspectors must know the plant intimately. The first step in the training program can profitably be a comprehensive tour of the plant, which must include every building, tank farm, unloading station and storage yard. Office and desk locations of key personnel should be pointed out, and processes and products explained in general. Possible hazards require detailed description, and areas where there might be personal exposure to corrosive or toxic chemicals need to be carefully and fully identified.

Training Methods

Training methods and facilities can be quite elaborate or fairly simple depending upon plant size, number of persons involved, and personnel turnover. Conference rooms, models, visual aids all can be put to good use. Movies and sound slides are available from many sources and are often both educational and entertaining. However, to justify the time required, they must have direct application. A film on fire engine operation is of little value in a plant which has no mobile equipment. Probably the best training always will be given "in the field." We can't inspect from a swivel chair, and even in this age of automation, there is, as yet, no device that will replace the long legs and sharp eyes of a well-trained inspector.

Knowing the Fire-Protective Equipment

The brigade members must have complete familiarity with the exact locations of all equipment in the fire-protective system. They must know where such equipment is, what it protects, and how it operates. A great deal of understanding and appreciation can be developed by means of simple demonstrations.

For example, a single open head sprinkler piped with a quick-opening valve at a convenient outdoor location where there is sufficient drainage can be used effectively to show fire fighting and operating personnel, including fork truck drivers, the large amount of water discharged and the general appearance of the spray pattern.

The effect of external obstructions and the necessity for proper clearance can be demonstrated by placing a pile of empty boxes under the sprinkler. This is a simple, inexpensive arrangement, yet those who see it always have a greater appreciation for the hazards of high piling and the importance of keeping drains clear and curbings intact.

Manufacturers and vendors of fire-extinguishing equipment will gladly demonstrate their products. Insurance engineers are available also to assist in a plant training program. From the experience of these men, many valuable inspection techniques can be learned.

After the Fire

Taking a careful look at what remains after a fire can be both illuminating and instructive for inspectors. The failure which caused a rapid, destructive fire growth often is clearly apparent, or it can be seen how a fire was quickly controlled by automatic sprinklers or confined by fire doors.

Proper Identification

Much confusion can be prevented if fire equipment is properly marked and identified. An itemized list of this equipment is very useful for regular inspectors and invaluable for vacation or sickness replacement personnel. Lists must be complete and reviewed and revised as often as necessary.

Summary

THIS article can be summarized in the following principles which may serve as a guide for developing sound inspection programs for industrial fire brigade members:

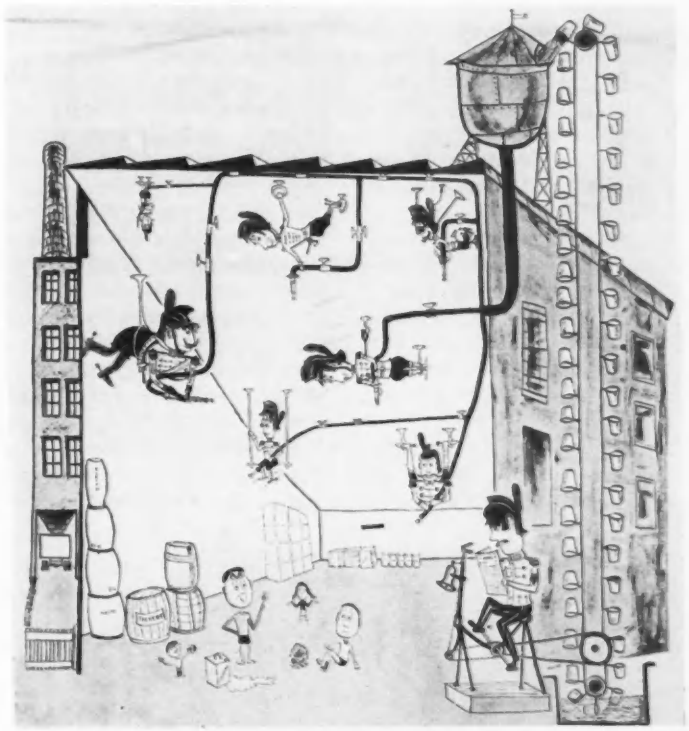
1. Develop an appreciation for the importance of inspections and a desire to maintain fire protection equipment in perfect condition.
2. Select capable personnel for training.
3. Show inspectors the physical plant — explain processes and products in general, the hazards in detail.
4. Instruct in the operation of fire-protective equipment — show how it works, what can go wrong, and what to do about it.
5. Teach by demonstration — use the services of manufacturers' representatives, vendors, insurance engineers, fire chiefs and others.
6. Avoid confusion — mark, identify, and use check lists.
7. Prepare for the emergency that "can't happen."
8. Review inspection procedures and retrain at frequent intervals.

(Right) Chicago, Illinois, March 21. About 5:45 p.m., fire started in a storeroom on the second floor adjoining the Council Chamber of Chicago's 12-story fire resistive City Hall building. Apparently caused by a discarded cigarette, it burned for some time and spread to the Council Chamber before discovery. It consumed a great deal of the combustible furnishings and oak paneling in the Chamber, spread to the third floor with flames reaching the fifth floor level on the outside of the building. More than 100 persons escaped or were rescued by fire fighters with only four persons hurt. Despite lack of sprinklers and unprotected floor openings, first responding fire companies were able to contain the fire, although subsequently "5-11" alarm response was called bringing 25 pumpers, 5 ladder trucks, 4 rescue squads and other apparatus. Loss was estimated at more than $500,000. *(United Press Photo.)*

Louisiana Conference

STATE Fire Marshal John E. Coon of Louisiana has announced that this year's Arson and Fire Prevention Conference will be held at the Monteleone Hotel in New Orleans, June 9 to 11. The 3-day program will feature authorities on arson and fire prevention.

Detailed information may be obtained from the Department of the State Fire Marshal, 110 Civil Courts Building, New Orleans, Louisiana.



"The Truth about Automatic Sprinklers"

Everybody in fire protection work has the problem of explaining to people what a system of automatic sprinklers is and why such a system is an important item of fire protection. The idea that each sprinkler head is a fireman on duty twenty-four hours a day has been used before, but seldom as effectively as in the above drawing which has been circulated by an NFPA member sprinkler manufacturer and contractor in Buenos Aires, Argentina. We are indebted to J. P. Guillermo Staudt of "Ideal" Proteccion contra Incendio ("Ideal" Fire Protection) for this cartoon which is from the 1957 calendar circulated by that company.

THE Fire Department of the "City of the Angels," largest municipal fire department on the West Coast, protects an area of 454 square miles and a population of nearly two and one-quarter million. The 2,832 uniformed members in the Department, plus some 135 civilian personnel, are commanded by Chief Engineer William L. Miller who was appointed to office on January 17, 1956.

Fire protection in Los Angeles is supervised by a 5-man policy-making Board of Fire Commissioners appointed by the Mayor, (Norris Poulson, scheduled to give the official welcome to the NFPA Annual Meeting on Tuesday, May 21). President of the board is G. William Shea. Chief Miller is a non-voting Board member responsible for administration of the Department.

The Fire Department has been expanding continually during the last few years, thanks to a 6-year building program now in process. The expansion is financed by a $4,500,000 bond issue authorized by the voters and will include construction of 25 new fire stations.

A little more than a year ago, the Department was reorganized. Now reporting to the Chief and serving as the Administrative Staff are the following seven Deputy Chiefs: D. T. Hibbard as Chief of Staff assists Chief Miller in Departmental Administration; W. R. Goss supervises fire suppression and rescue activities in Area I, roughly, the easterly, southerly and central parts of the City; M. E. Meador has similar responsibilities in Area II, the westerly and northerly parts of the City; R. M. Hill serves as Fire Marshal and heads the Fire Prevention Bureau; C. W. Bahme is Director of the Bureau of Personnel, Training and Civil Defense; H. N. Johnson, Director of the Bureau of Building Administration, which executes the Department's building program and operates the communications and water supply systems; and E. A. Lotz who has general supervision over the shops, rescue service, radio service and general supply and inventory.

The fire fighting components of the Los Angeles Fire Department operate as four divisions, covering Areas I and II of the City. Division I with 650 men operating from 25 fire stations protects about 76 square miles; Division II has 600 men, 23 stations and protects an area of 109.54 square miles; Division III has 900 men, 27 stations and protects 56 square miles in the more populous north central section; Division IV has about 250 men in 15 stations protecting more than 213 square miles of less densely populated area in the northwestern part of the City. Each division has three Assistant Chiefs — two alternating in command on 24-hour basis, with the third filling in on "days off."

Los Angeles has some unique fire apparatus, built to rigid specifications, included in the 90 engine companies, 30 truck companies, and 64 other units that protect the huge municipal area. There are, for example, the four manifold companies — "mobile fire hydrants" — in which a manifold hose wagon operates with a manifold pumper which has either two 1500 gpm dual pumps or a 2000 gpm triple stage pump. (See June, 1950 FIREMEN.) The Department also operates 23 high pressure companies. Each has a high pressure pumper with a 400 gallon tank accompanied by a 1250 gpm pumper. Altogether the Bureau of Supply and Maintenance has some 753 pieces of rolling stock to keep in shape. All of the front line units, chiefs' cars and certain other cars in the Department have 3-way radio.

For several years the Department has continued its effective and thorough inspection program. During 1955–56, men of the Department inspected 31,444 homes as part of this program. In addition, Fire Prevention Bureau inspectors visited 58,416 business and industrial firms and Mountain Patrol units of the Department made some 34,000 inspections in their protected districts.

As reported in the September, 1956, FIREMEN the Los Angeles Fire Department also conducts an extensive Junior Fire Department program in the City's schools, reaching about 70,000 children.

William L. Miller
Chief Engineer
Los Angeles Fire Department

Los Angeles Wlc

Some of the nation's top-notch fire[fs] ar[e] 61st NFPA Annual Meeting a success. [It] be h[eld] 20-24, with the Hotel Statler as headqu[arters].

Chief William L. Miller of the Los [Ang]es Fi[re] Committee on Arrangements; Chief [Ke]E. K[ing] County Fire Department, is chairman [of] the Charles N. Carrell of Santa Monica h[as] the Edmondson of Pasadena heads the P[ubli]ty C[om]mond M. Hill, Fire Marshal of the Los [Ang]eles mittee on General Services.

On these pages are brief description[s] the County Fire Departments. Some of th[e] form Boris Laiming, prepared for a forthcom[ing] sue [of] lished by the Los Angeles Fire Fighters' [Asso]ciatio

(Left) One of the powerful combinations in Los Angeles consists of this new Crown high pressure pumper teamed with the 1250 gpm pumper (rear).

Keith E. Klinger
Chief Engineer – County Forester
and Fire Warden
Los Angeles County

s Welcomes NFPA!

tch firefs are lending their efforts to make the ccess. be held in Los Angeles, California, May headqu.

e Los Ang Fire Department is chairman of the Chief K E. Klinger, who heads the Los Angeles hairman the Entertainment Committee; Chief onica h the Welcome Committee; Chief S. H. the Pa Committee; and Deputy Chief Ray- the Los les Fire Department, heads the Com-

scription the Los Angeles and the Los Angeles ne of th formation is based upon an article by rthcomi ue of the "Firemen's Grapevine," pub- ighters' ciation.

SECOND to the Los Angeles Fire Department in size, and protecting a vast 4,083 square mile area, is the Los Angeles County Fire Department. Headed by Chief Engineer Keith E. Klinger and Deputy Chief John W. Duncan (also Chief Assistant Forester and Fire Warden) this Department protects all unincorporated areas of the County, five cities which have contracted for protection, and sprawling, mountainous brush and forested areas, particularly in the northern part of the County. The Department, accordingly, has responsibility for fire fighting and forestry work, and Chief Klinger has the dual title of Chief Engineer of Fire Protection Districts, and County Forester and Fire Warden.

The County has a population of 5,400,000 with more than 95 percent living in about 1,200 square miles of the southern section. At last reports, this population was expanding at the rate of 20,000 per month. (See May, 1955 FIREMEN.)

As second in command, Chief Duncan coordinates departmental activities at headquarters. The heads of four principal divisions of the Department report to him, including First Assistant Chief Roland Percey who commands the Fire Fighting Services; Assistant Chief L. A. Dutton in charge of the Fire Prevention Bureau; Manager George M. Ashe in charge of the Business Division; and Head Deputy Forester Ralph M. Wagner who heads the Forestry Division. In addition, Headquarters features a research and planning section, a fire research analyst, a training section with a Battalion Chief in command, a public information officer, a property agent, and a Headquarters Captain — all reporting to Chief Duncan.

Reporting to Chief Percey are five Assistant Chiefs, three of whom command the three Fire Fighting Field Divisions, and the other two commanding the Construction and Special Services Divisions.

The Field Divisions consist of 11 battalions and 92 fire stations, incorporating the following units: 110 engines, 4 aerial ladder trucks, 16 rescue trucks, 42 patrol pumpers, 4 tractors, 28 miscellaneous fire and emergency apparatus, and 26 reserve and spare pumps and tanks.

The Department has some 30 mutual aid agreements with municipalities and cooperating agreements with 3 other counties. Communications are maintained through four dispatching centers and a mutual aid center at Headquarters. All operating units of the Department are equipped with three-way radio. A new development is the installation of selective calling units for dispatching apparatus by radio. At least 28 of the fire stations have this system and ultimately most of the stations will be so equipped.

Another feature of the Department is the Cecil Royal Gehr Fire Combat Training Center, dedicated in November, 1955. (See FIREMEN for January, 1956.) This 5-acre training center features a 5-story drill tower, drafting pits, a training station and other facilities.

The diverse fire fighting problems in the County has led the Department to acquire special apparatus. There is, for example, the pumper-tanker, a triple combination pumper of 1250 to 1500 gpm capacity with a large water tank. Tractors, equipped with hose reels, are also used to lay 1½-in. hose lines from tankers operating in mountainous areas. The Department also makes use of a "fuel dispenser," a special skid mounted unit that carries 420 gallons of gasoline and 230 gallons of diesel fuel, to replenish fuel supplies of apparatus in fire combat. (See July, 1956 FIREMEN.)

There is also a unique Weed Abatement program carried out with the assistance of light trucks which crews operate to reduce weed and brush hazards in built-up areas.

As Chief Klinger reported during the 1956 NFPA Annual Meeting in Boston, Massachusetts, his Department also carries out extensive fire prevention activities and has established a Junior Fire Department program for 25,000 school children. Members of the Fire Department have made excellent use of "Sparky" for fire prevention lectures.

(Right) One of the County's 1250 gpm pump and rescue units housed in attractive Station No. 47 in Temple City.

NEW DURA-FOG NOZZLE by POWHATAN

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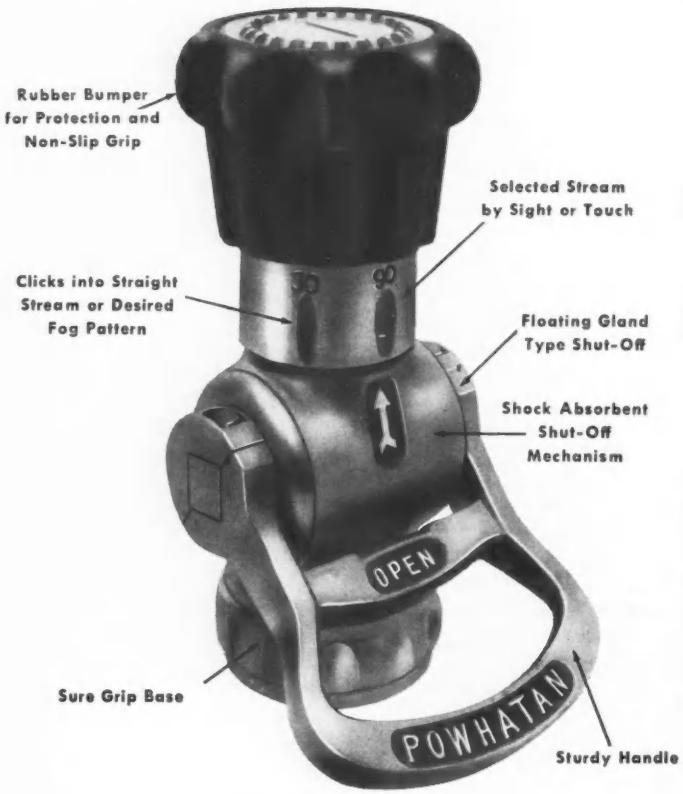
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100% PERFORMANCE TEST for every Dura-Fog Nozzle!

Performance Test Data for 1½" Size

Water Pattern	GPM	Reach	Nozzle Pressure
STRAIGHT STREAM	57 62	85′ 105′	100 psi 125 psi
30° FOG PATTERN	60 65	40′ 43′	100 psi 125 psi
60° FOG PATTERN	65 68	30′ 35′	100 psi 125 psi
90° FOG PATTERN	72 75	20′ 22′	100 psi 125 psi

Contact your local distributor today, write POWHATAN direct for all the facts on the new Dura-Fog Nozzle. . . . Ask for our free Catalog "A".

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Rescue Boats for East Providence

Rescue boat No. 1 with a 3-man crew. Hose streams are being supplied by a 500 gpm portable pump loaned to the East Providence Fire Department by the Navy.

THE East Providence, Rhode Island, Fire Department, headed by Chief Earl C. Griffith, recently added three aluminum rescue boats to its equipment. Two of the 15-ft. 9-in. boats are powered by 15-horsepower motors, while the third has an 18-horsepower motor. Included in the equipment purchased for a total expenditure of $4,300 were three 2-wheel trailers, two telescopic retriever poles for rescue work on ice and water, a shoulder life line gun, torpedo buoys, life line reels and throw rings. The Department already owned a complete kit of diving gear.

Members of the Department underwent special training on Narragansett Bay to become familiar with the equipment and proper "sea-going" fire fighting and rescue techniques. East Providence has nine miles of salt water coast line, three fresh water ponds and the Ten Mile River. Now, one of the rescue squads will operate from Fire Department Headquarters while the other two squads operate from separate fire stations. The squads will provide quick response of trained personnel for fires and accidents in the recreational Bay area.

According to reports, Chief Griffith plans to enroll his Department in the International First Aid and Rescue Association. (*Providence "Journal" photos.*)

Chief Griffith demonstrates a 36-ft. telescopic tube and noose designed primarily for ice and water rescue.

Yankee Ingenuity from the Land o' Goshen!

Hose drying facility spotted by an NFPA member in a small New England community. While this method of drying is not recommended in the newly revised edition of NFPA Standard No. 198 — "Care of Fire Hose," at least it assures that fire fighters will get some lively training in hose and ladder evolutions. After a while it is a simple matter to trot up the ladder and swap the hose around so that each end will receive its fair share of heat treatment from the sun. (*Photo by Howard C. Bogue.*)

Award to U. S. Post Office Department

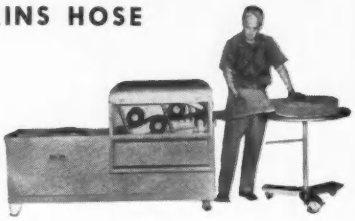
On March 25, 1957, NFPA General Manager Percy Bugbee presented a certificate of merit to the U. S. Post Office Department for its participation in the 1956 Fire Prevention Week program. Shown left to right are Edward Blandy, Director, Safety and Health; Eugene J. Lyons, Assistant Postmaster General; Arthur E. Summerfield, Postmaster General; Mr. Bugbee; Maurice H. Stands, Deputy Postmaster General; and Charles A. Peters, Assistant Chairman, Federal Fire Council.

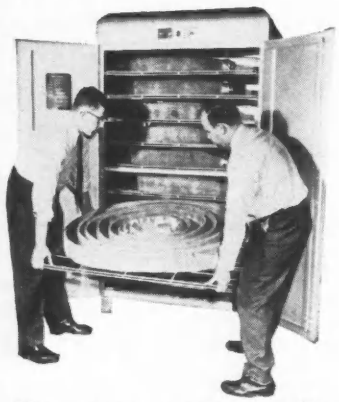
Changing address? Be sure to notify the NFPA Executive Office.

Better Hose Care-with CIRCUL-AIR
HOSE CONDITIONING EQUIPMENT
WASHERS • DRYERS • TURN-TABLES • STORAGE RACKS

NEW *Roto-Jet* HOSE WASHER AUTOMATICALLY WASHES—RINSES—DRAINS HOSE

ROTO-JET Washes, Rinses, Drains hose thoroughly and quickly. Hose is self-propelled. Simple, one-man operation. With or without detergents, ashes, dirt, mud and sludge are automatically scrubbed out and flushed away. Saves time. Lengthens hose life. Now . . . with Food Pedal Operation.





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The patented, electrically operated Circul-Air hose dryer circulates prewarmed fresh air through loosely coiled hose at the rate of 5 to 6 air changes per minute. Saves floor space, hard work and lengthens hose life. No other drying method is so fast—so economical—so easy to use. Circul-Air is the preferred drying method in over 4,000 leading Fire Departments.

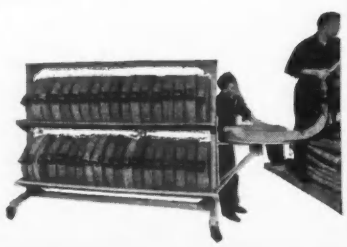
ACCEPTED—APPROVED—RECOMMENDED

Approved by Underwriters' Laboratories . . . and Canadian Standards Association. Recommended by all leading fire hose manufacturers.

LABORATORIES APPROVED

PORTO-RAK HOSE STORAGE AND LOADING UNIT

Saves valuable space. Holds 1800 ft. of 2½" hose—proportionately more of 1½"—in an 8 ft. space (when loading table is detached). Roll it right up to the truck for complete hose reload—out of the way when not in use. Equipped with locking fiber-wheeled casters.



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Shipboard Fire Fighting

AN INTERESTING, well-illustrated manual describing equipment and methods for fire fighting aboard ship is available from the Government Printing Office. It is a November, 1956 revised edition of Chapter 93 "Fire Fighting — Ship" of the Bureau of Ships Manual, paper bound, 116 perforated pages, 7¾ by 10¼ inches in size.

The fourteen articles in the First Section describe fire fighting apparatus and extinguishing equipment available aboard ship; the Second Section describes the breathing apparatus for ship personnel; while Section Three gives description of fire fighting techniques recommended for Navy personnel.

Copies of the manual may be obtained by writing to the Superintendent of Documents, Washington 25, D. C. Ask for Bureau of Ships Manual — Chapter 93. It is priced at 55 cents per copy.

Useful Directory

AN INTERESTING and informative pocket-size directory was recently published by the Puget Sound and the Central Puget Sound Firemen's Associations of the State of Washington. The 3¾ by 6½ in. paper-bound 128-page booklet presents a thorough report of the fire departments, their apparatus and equipment in Pierce, King and Snohomish Counties. The Associations were assisted by the Civil Defense organizations of the three counties and by fire equipment manufacturers.

According to the Directory, there are 102 fire departments in the three counties, having a total of 431 pieces of fire apparatus and rescue units. Thus, the average fire department has 4.2 units of apparatus. There are 113 resuscitation units in

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71 of the departments, while gas masks are available in 82 of the departments. Sixty departments have mobile 2-way radio, while the rest have none. There are 49 generators in 35 departments, ranging from 750 to 2500 watt capacity. There are 30 smoke ejectors in 24 of the departments, 54 foam applicators in 31 departments, 73 portable pumps in 49 departments, and floodlights in only 6 departments.

Fire hose reported ranged from ¾-in. booster size to the 3½-in. size, with the greatest amount in the 2½-in. size.

If other firemen's associations have published similar studies, it will be appreciated if single copies are sent to the NFPA Fire Services Department.

"Fire Stream Practices"

THE Fire Protection Department, Oklahoma A & M College, Stillwater, Oklahoma, has announced publication of a third edition of the training manual "Unit IV, Fire Stream Practices." The well-illustrated, 65-page, 8½ by 11 in. paper-covered book is available from the above address at $1.50 per copy.

"The Romance of Firefighting"

A WELL-ILLUSTRATED 209-page volume with the above title was published last year by Harper & Brothers, 51 East 33rd Street, New York 16, New York. Written by Robert S. Holzman, it presents brief descriptions and excellent illustrations of highlights in the history of U. S. fire departments.

Priced at $7.50 per copy, the 9½ by 12½ page volume may be purchased by writing to the Mail Order Division of the publishing company at the above address.

NEW! FOR YOU!

FD NEW CAR EMBLEM. 4" cast aluminum. Fits all cars. $1.98.

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NEW "QUAKER 100" is made from extra-long staple cotton, chemically treated to keep its flexibility and reduce elongation.

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It's new "Quaker 100"—a 600 lb. hose. And it's quick drying, easy to pack and fold!

● **It's light!** One coupled length of "Quaker 100" weighs only 34½ lbs.

● **It's strong!** Specially treated cotton provides at least 10% more strength in each warp strand woven into the jacket. (Average burst pressure per three-foot length is 1200 lbs.)

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SEE THE SAVINGS! See how easy "Quaker 100" is to use and maintain! Call your Quaker-Quaker Pioneer distributor today. For free brochure, write: *H. K. Porter Company, Inc., Quaker Rubber Division*, Philadelphia 24, Pennsylvania, or Pittsburg, California.

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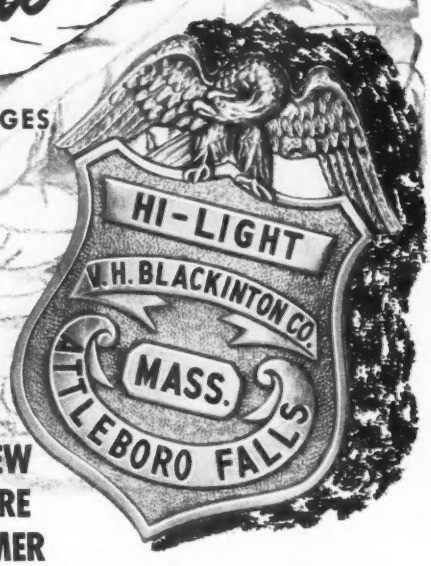

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Fire School Dates

Alabama: The 21st Annual Alabama State Fire College will be held at University, June 3–7. Write to Director M. O. Hulsey, Assistant Supervisor, Public Service Training, Trade and Industrial Education, P.O. Box 1813, University, Alabama.

California: Fire Service Instructors Workshop, Fresno, May 13–17. Fire Investigation and Arson Seminar, University of California, Los Angeles, June 10–14. Write to Director Tom S. Ward, Supervisor of Fire Training, State Department of Education, 721 Capitol Avenue, Sacramento 14, California.

Colorado: Colorado State Firemen's Convention and Fire School, Loveland, June 19–22. Write to Director A. L. Becker, Secretary, Colorado State Firemen's Association, 2224 South Stuart Avenue, Denver 2, Colorado.

Idaho: The Idaho State Fire School will be held in Idaho Falls, August 15–17. Write to Chief Bert O. Brown, Fire Department, Idaho Falls, Idaho.

Illinois: The 33rd Annual State Fire College, University of Illinois at Champaign-Urbana will be held June 10–13. Regional Officers Schools at Jacksonville, April 1 to May 6 and Belleville, April 2 to May 7.

Iowa: The 33rd Annual State Fire School will be held at Iowa State College, Ames, June 18–21. Write to Director Keith Royer, Supervisor, Firemanship Training, 110 Marston Hall, Iowa State College, Ames, Iowa.

Kentucky: The Kentucky Fire School will be held at the University of Kentucky, Lexington, June 4–6. Write to Director John L. Thompson, Assistant Manager, Kentucky Inspection Bureau, 940 Starks Building, Louisville 2, Kentucky.

Michigan: The 29th Annual State Fire College will be held at the University of Michigan, Ann Arbor, June 25–28. Write to Director Francis Hartman, Supervisor, Firemanship Training, 4524 Administration Building, Ann Arbor, Michigan.

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Used, self-sustaining Aerial Ladder Truck with ground ladders.

Write at once to:

HORICON FIRE DEPT.

Capt. Louis Last

609 N. Cedar St., Horicon, Wis.

Mississippi: The Mississippi State Fire School will be held at Mississippi State College, Starksville, June 24–28. Write to Director J. I. Fetters, Administration Assistant, University of Missouri, Room 101 Building T-11, Columbia, Missouri.

Missouri: The 21st Annual Central Missouri Fire Conference will be held at the University of Missouri, Columbia, July 26–28. Write to Director J. I. Fetters, Administration Assistant, University of Missouri, Room 101, Building T-11, Columbia, Missouri.

Montana: The Montana State Fire Chiefs' Convention is scheduled to be held in Lewistown, June 6–8. Further information may be obtained from Secretary-Treasurer William S. Hayes, Montana State Fire Chiefs' Association, 312 1st Ave., No., Great Falls, Montana.

South Carolina: State fire training service given by itinerant instructor in local classes. Write to Director Clarence A. Fischer, Orangeburg, Itinerant Instructor H. B. Wells, 1539½ Harrington Street, Newberry, South Carolina.

South Dakota: The State Fire School at Mitchell, June 3–7. Chairman Robert Hanigan, Secretary, State Volunteer Firemen's Association, Box 423, Pierre, S. Dak.

Texas: The Fireman's State Training School will be held at the Texas A & M College, College Station. Write to Director Henry D. Smith, Chief Firemen's Training School, Engineering Extension Service, A & M College, College Station, Texas.

Virginia: The Williamsburg Fire Department will be host to the Second Annual Virginia Firemen's School June 24–28. For information write to Robert B. Smith, Assistant Marshal, Office of the Fire Marshal, Williamsburg, Virginia.

Washington: The Annual State Firemen's School will be held at Spokane, July 11–13. Write to Secretary Emma Ethier, State Firemen's Association, 200 Fifteenth Avenue, Seattle 2, Washington.

West Virginia: The State Fire School will be held at Morgantown, July 22–26. Write to Director R. E. Hanna, Jr., West Virginia University, Morgantown, W. Va.

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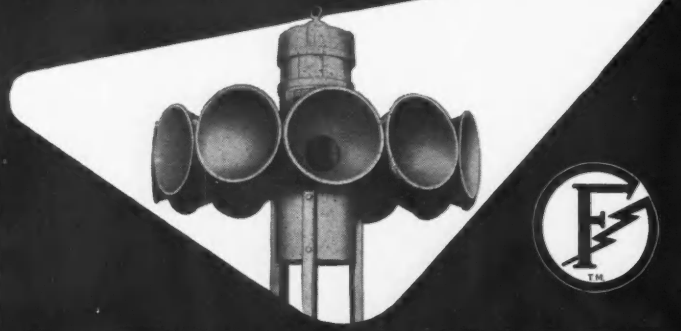

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The FEDERAL STH includes all the advanced features of its forerunner, the FEDERAL STL, but produces a better and more contrasting pitch; more sound output, with more simplified construction.

Priced only slightly above conventional sirens, its roof or pole mounting assembly has reduced the total installation cost to no more than conventional units. Now, during the season of greatest fire hazard growing communities need better sirens for fire or disaster warnings! Replace or supplement your inadequate siren with the big New FEDERAL STH-10 Siren, the very best! Write for catalog 200.

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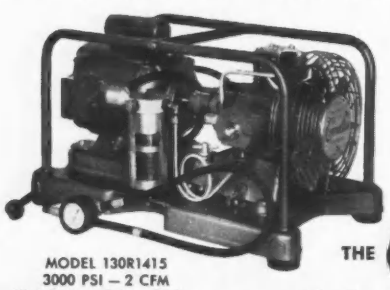
CHIEF G. M. THOMPSON, RURAL FIRE DEPARTMENT, ROCHESTER, MINN. SAYS:

"We know through our own experience that the cost of owning a Cornelius compressor is small compared to the safety it provides our men."

Chief Thompson's report continues — *November 17, 1956 at a bad fire in a Rochester department store, our Cornelius compressor provided unlimited air supply for our men. We plugged the compressor into a light post socket and filled cylinders when they were empty. Without the compressor, our fresh air breathing equipment would have been out of service the last four hours of the fire." (Original letter on file.)*



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3000 PSI — 2 CFM
Weight complete — 95 lbs.

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Institute of Fire Prevention and Fire Protection

CITY Fire Marshal Harold L. Foster, Department of Public Safety, Louisville, Kentucky, has reported on a successful fire prevention and protection school conducted by his department to train key personnel in business and industry.

Named the "Louisville Institute of Fire Prevention and Fire Protection," the school consists of a series of evening classes. The first was conducted on June 12th, 1956 and in five weeks 32 persons received special diplomas for completing the course. At the midwinter school the graduating group had been increased to 78. A full complement of students is expected for the forthcoming midsummer school.

Classes include night watchmen, volunteer fire chiefs, industrial plant protection chiefs, safety directors, plant owners and Federal employees. Primarily, instruction covers the many phases of industrial fire protection and fire prevention. Subjects taught include the responsibility of management in loss reduction programs, planning of facilities and processes, safe plant operation, adequate fire protection measures and salvage. Other instruction covers automatic sprinkler protection, water supplies for industrial fire protection, portable fire extinguishers, instructions of fire protection equipment, protection for flammable liquids, and other items important to industrial plant protection.

Included on the faculty are Fire Marshal Foster, Chief Joseph Atzinger of the Shively, Kentucky, Fire Department and Engineer William C. Bryan of the Kentucky Inspection Bureau.

Correspondence Wanted

A MEMBER of the fire services in Great Britain would like to exchange correspondence with fire fighters of the Canadian or American fire service. Mr. Noel D. Weston, Ministry of Transport and Civil Aviation, Aerodrome Fire Service Training School, Pengan Moors, Airport, Cardiff, South Wales, Great Britain, is particularly interested in the practical use of American fire pumps and enlistment procedures in municipal fire departments.

MIDSHIP PUMPERS ranging to 1000 GPM capacities . . . CRASH TRUCKS . . .

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TANKERS . . . with famous CHAMPION Pumps of 1-2-3-4 stages . . . . . .
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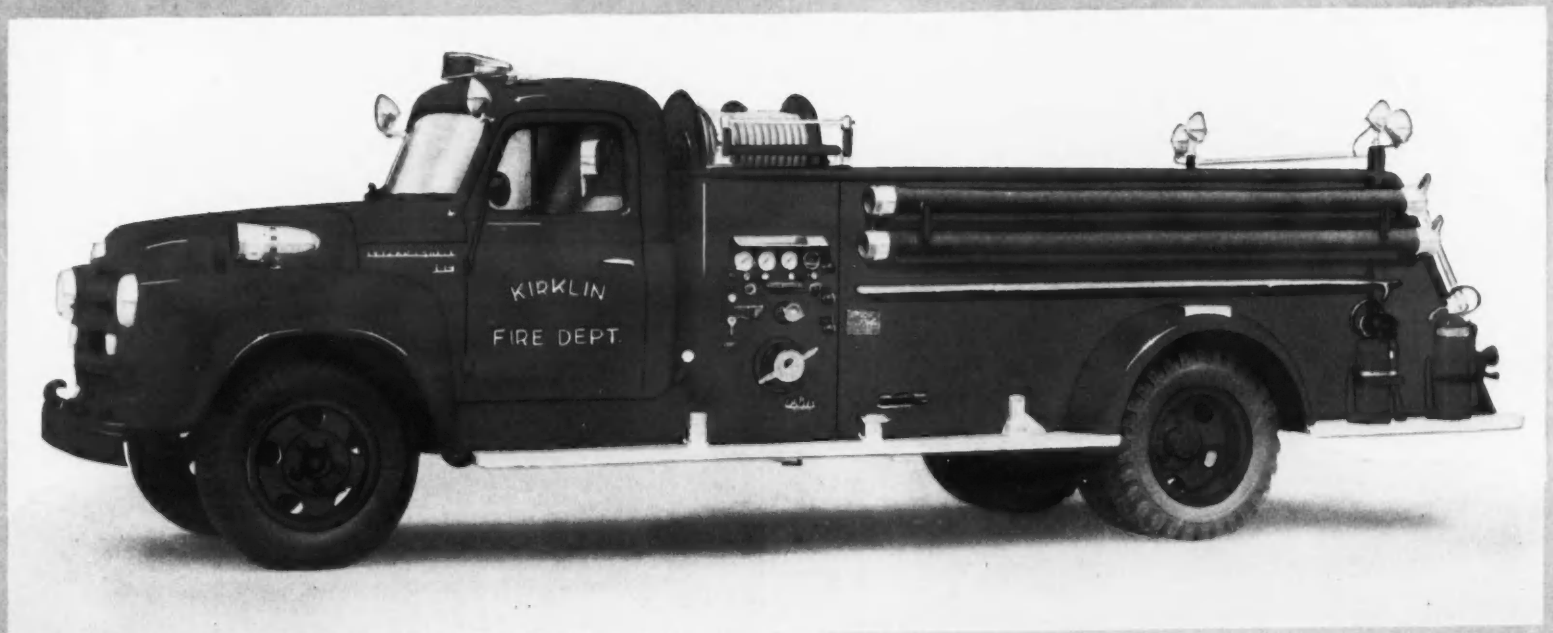

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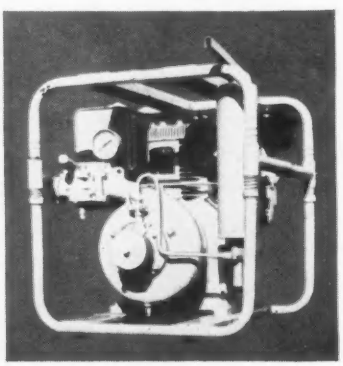
Fight Brush Fires From Moving Truck with a Hale Type FZZ PORTABLE PUMPING UNIT!

Picture below shows fire fighter handling stream from a Hale Type FZZ Portable Pumping Unit mounted on a moving truck. An FZZ can be mounted permanently on truck or carried as a portable unit for pumping into or *from* booster tank. This portable arrangement is extremely useful both for fighting brush, field or forest fires while in motion; or for pumping from pond, stream or well direct.

An FZZ will supply from draft 2 capable fire streams thru 1½" lines. Performance substantially exceeds NBFU and NFPA capacity and pressure requirements.

A frame-mounted FZZ (with carrying handles turned in) is pictured at right. Also available mounted on two wheels or on rubber-cushioned steel channels. **Note:** Discharge Adapter can be supplied for use with 2½-inch hose.

**Write today for NEW FZZ Folder.*
Let us know if you want a demonstration.



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Fire Pumps in All Standard Capacities

NOTE:
FZZ Now Has NEW—
- **Ball-Type Valve**
- **Improved Priming**

Got a Story to Tell?

ON THESE pages are listed the names of 50 fire departments from 21 of the United States and from 3 Provinces of Canada, who have recently taken membership in the NFPA. This group is representative of the 2,300 fire departments throughout North America whose members are making good use of the publications and information available from NFPA, or who participate in NFPA annual and regional meetings. (See pages 18 and 19.)

The NFPA Fire Services Department has vital interest in every fire department that joins the Association. Unfortunately, in the course of time, the editors of FIREMEN magazine can visit only a few of the thousands of departments that are a part of the Association, and whose activities, histories and problems would be of considerable interest to the more than 30,000 readers of the magazine.

Occasionally, some fire officer or fire fighter will prepare a story with good pictures and send it to the editors. Most of the time, such stories are published and letters to the Fire Services Department indicate that the articles command high reader interest.

Accordingly, we ask all NFPA member fire departments to consider preparation of a self-descriptive story for possible publication in this magazine. We would like to know about your new stations, apparatus and equipment, about the officers and men who make up your department, about your fire control and fire prevention problems, about your training program and experiments with techniques and equipment, what you are doing to gain the support of your community and any other details that would be of interest to the readers. When requested, all pictures and other illustrations will be returned.

Send your story to the NFPA Fire Services Department, 60 Batterymarch Street, Boston 10, Mass.

NFPA Welcomes:

British Columbia: Harwood Fire Department, Nanaimo.

California: Brawley Fire Dept., Brawley; Chief Richard A. Siess, Brisbane Fire Dept., Brisbane; Fallbrook Fire Protection District, Fallbrook; Healdsburg Fire

Dept., Healdsburg; Isleton Vol. Fire Dept., Isleton; City of Mendota Vol. Fire Dept., Mendota; Chief Joseph E. Pashots, Newark Fire Dept., Newark; Hagginwood Fire District, North Sacramento 15; San Luis Obispo Fire Dept., San Luis Obispo; Tehachapi Fire Dept., Tehachapi; Upland Fire Dept., Upland; Marin County Fire Dept., Woodacre.

Connecticut: Bethlehem Vol. Fire Dept., Inc., Bethlehem; Cheshire Fire Dept., Inc., Cheshire; Darien Fire Dept., Inc., Darien; East Hartland Vol. Fire Dept., East Hartland; South Windham Fire Dept., Inc., South Windham; Yalesville Vol. Fire Dept., Yalesville.

Delaware: Citizens' Hose Company No. 1, Inc., Smyrna.

Florida: Town of Lake Park Vol. Fire Dept., Lake Park; Orlando Fire Dept., Orlando; Surfside Fire Dept., Surfside.

Idaho: Coeur d'Alene Fire Dept., Coeur d'Alene; Oakley Fire Dept., Oakley; Sandpoint Fire Dept., Sandpoint.

Illinois: Dupo Fire Protection District, Dupo.

Indiana: Coolspring Twp. Vol. Fire Dept., Inc., Michigan City; Wilbur Vol. Fire Dept., Inc., Monrovia.

Kentucky: Fairdale Vol. Fire Dept., Fairdale; Radcliff Fire Dept., Vine Grove.

Maine: Harrison Vol. Firemen Assn., Inc., Harrison.

Michigan: Chief Robert J. Braun, Ann Arbor Twp. Fire Dept., Ann Arbor; Chief Louis Goebel, Moorland Twp. Fire Dept., Ravenna.

Missouri: Chief J. N. Goldsmith, Kennett Fire Dept., Kennett.

New Brunswick: Chief A. W. Brown, Dalhousie.

New Jersey: Chief Paul Doboney, Wharton Fire Dept., Wharton.

North Carolina: Chief A. B. Roddy, 10-A Fire Dept., High Point.

North West Territory: Chief Emil M. Eyford, Hay River Fire Dept., Hay River.

Ohio: Pepper Pike Vol. Firemen's Assn., Chagrin Falls; Eastlake Vol. Fire Dept., Eastlake.

Oregon: Grants Pass Fire Dept., Grants Pass; Chief J. R. Russell, Hermiston Vol. Fire Dept., Hermiston; Philomath Vol. Fire Dept., Philomath; Happy Valley-Rural Fire District No. 65, Portland; St. Helens Fire Dept., St. Helens.

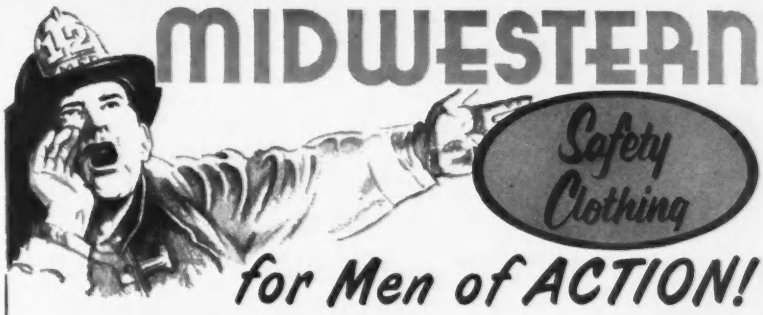
Pennsylvania: Nanticoke Fire Dept., Nanticoke.

South Carolina: Lexington Vol. Fire Dept., Lexington.

Virginia: Chesapeake Beach Vol. Fire Dept., Inc., Bayside; Mt. Jackson Vol. Fire Dept., Inc., Mt. Jackson.

Wisconsin: Town of Turtle Vol. Fire Dept., Beloit.

Wyoming: Evanston Fire Dept., Evanston.



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Radioactivity and Fire Fighting

THE Fire College of the New York City Fire Department has published an interesting bulletin for members of the Fire Department. Titled "Standard Procedures in Relation to Radioactive Materials," it has some detailed information on what to do about fire involving such materials. Readers of FIREMEN may be interested in the operational procedures recommended in the bulletin and reproduced below.

Principles of Operation

1. Apparatus and equipment should be parked to avoid any contamination from dust, smoke and flow-off water. This can be accomplished by parking apparatus on the windward side of the installation and on high ground.

2. Fire personnel should not enter a placarded area unless accompanied by a Fire Department Monitor, or a Monitor provided by the management, who shall be equipped with appropriate equipment for radiation detection.

3. Members should, in every case possible, utilize the fire department equipment (radiological). All findings shall be checked by more than one instrument when necessary to assure accuracy.

4. Members should base their operational procedures on the basis of their own findings. Information obtained from sources outside the fire department should be utilized only as an aid to double-check their findings.

5. Until the arrival of a Monitor, fire personnel should make every effort to confine the fire to the room or area involved. Consideration should be given to the possibility of the spread of radioactive contamination before ventilation is attempted.

6. Fire personnel entering a placarded area *must* use "Air-Paks" or Bureau of Mines approved breathing apparatus of the self-contained type or, if these are not available, as a minimum, utilize an all-service mask containing a filter approved for toxic smokes. Fire fighting clothing, including gloves and boots, shall be worn by personnel at all times.

7. Contaminated area shall be roped off or otherwise designated. Fire personnel operating inside the area should not be allowed to pass from contaminated area until decontaminated or monitored. Tools and equipment shall be handed to operating personnel by member detailed to remain with apparatus outside the contaminated area. Every effort must be made to prevent spread of contamination. However, nothing in this paragraph shall be construed to prohibit or delay the departure, from the contaminated area, of persons injured or heavily contaminated.

8. Members shall not delay first aid precautions after being found contaminated. Such first aid precautions shall be showering of contaminated persons with hose streams.

9. The wide pattern, low velocity fog nozzle should be used instead of straight streams, whenever possible, to minimize the disturbance of radioactive materials. The safety factors of time, distance, and shielding should be utilized.

10. Fire personnel shall not attempt any salvage operations after the fire except in the presence of and under the direction of the Fire Department Monitor. The Monitor should survey the area and determine which sections are safe from radiation.

11. Should the face mask be dislodged while in the contaminated area, the fireman should leave the scene immediately. The mask should be affixed only in an area free from contamination.

12. Any fireman who receives a cut or abrasion, or who handles any unprotected radioactive material shall report the incident.

13. All radiation exposures must be evaluated and an entry made in the personnel and medical records of the individual concerned. No individual shall exceed the total limit of prescribed exposure. (Tentatively 5 roentgens per incident or per year.) To effectively control the exposure of personnel, insofar as possible, entrance and exit from contaminated area shall be logged in some convenient form indicating time of entrance; time of exit; name; company number; and, if possible, location within the contaminated area (floor, area, etc.).

14. No smoking, eating or drinking should be permitted in or about the area of radioactive contamination nor while the person is contaminated.

15. All equipment, apparatus or protective clothing used by the fire forces should be monitored for radiation contamination. If any equipment cannot be decontaminated at the scene, it should be isolated for future action.

16. All personnel engaged in operations where radioactive materials are involved should, prior to the removal of the fire clothing, wash the clothing down with the hose stream. Upon return to quarters, take a thorough shower bath, scrubbing gently several times with soap and water. The bathing shall not be so severe as to damage the skin or cause chafing. Particular attention should be given to the skin under the fingernails and to washing of the hair. Each item of clothing shall be laundered several times before being worn again. Special care and consideration should be given to the towel used in drying one's person.

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Eastman Model 20 Deluge Gun is designed for permanent installation on fire apparatus, fire boats, oil refineries, lumber yards, or any outside plant installations requiring quick effective fire protection. When a large volume of water is to be delivered in solid, far-reaching streams — SPECIFY EASTMAN MODEL 20.
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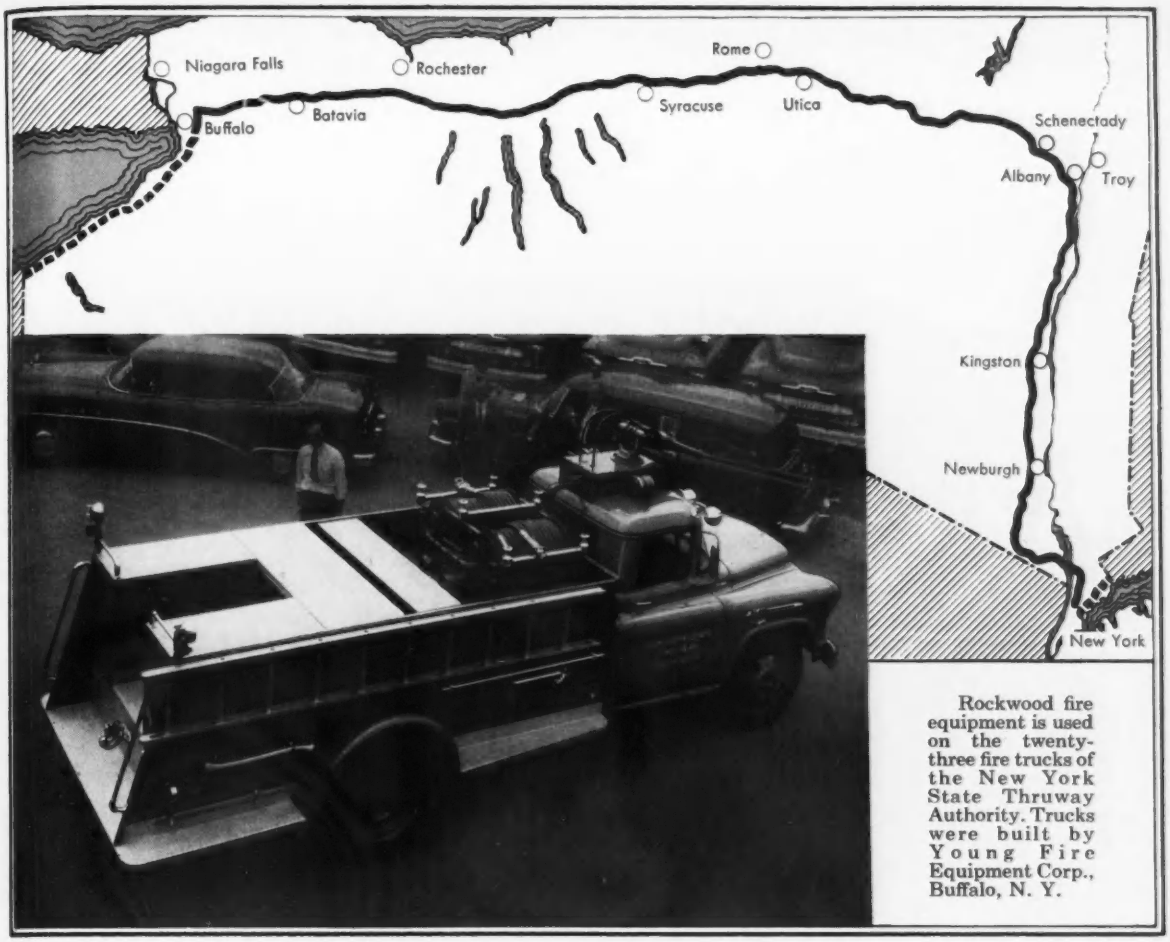

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From New York City to Buffalo these highly maneuverable fire trucks are ready to quickly control gasoline, oil or brush fires — and thanks to Rockwood Double Strength FOAM — they can do a big job with a relatively small amount of water.

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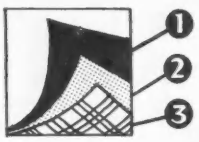

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New Pumpers for New York

THE New York City Fire Department has established a contract for 44 new fire pumpers with Mack Trucks, Inc., of Plainfield, New Jersey. Total cost of the apparatus will be $730,642. All apparatus will be 750 gpm cab-ahead-of-engine pumpers equipped with a 375 gallon booster tank, booster reel and portable deluge gun.

One special unit will be equipped with a torque converter drive which eliminates hand shifting.

Old Problem — New Name

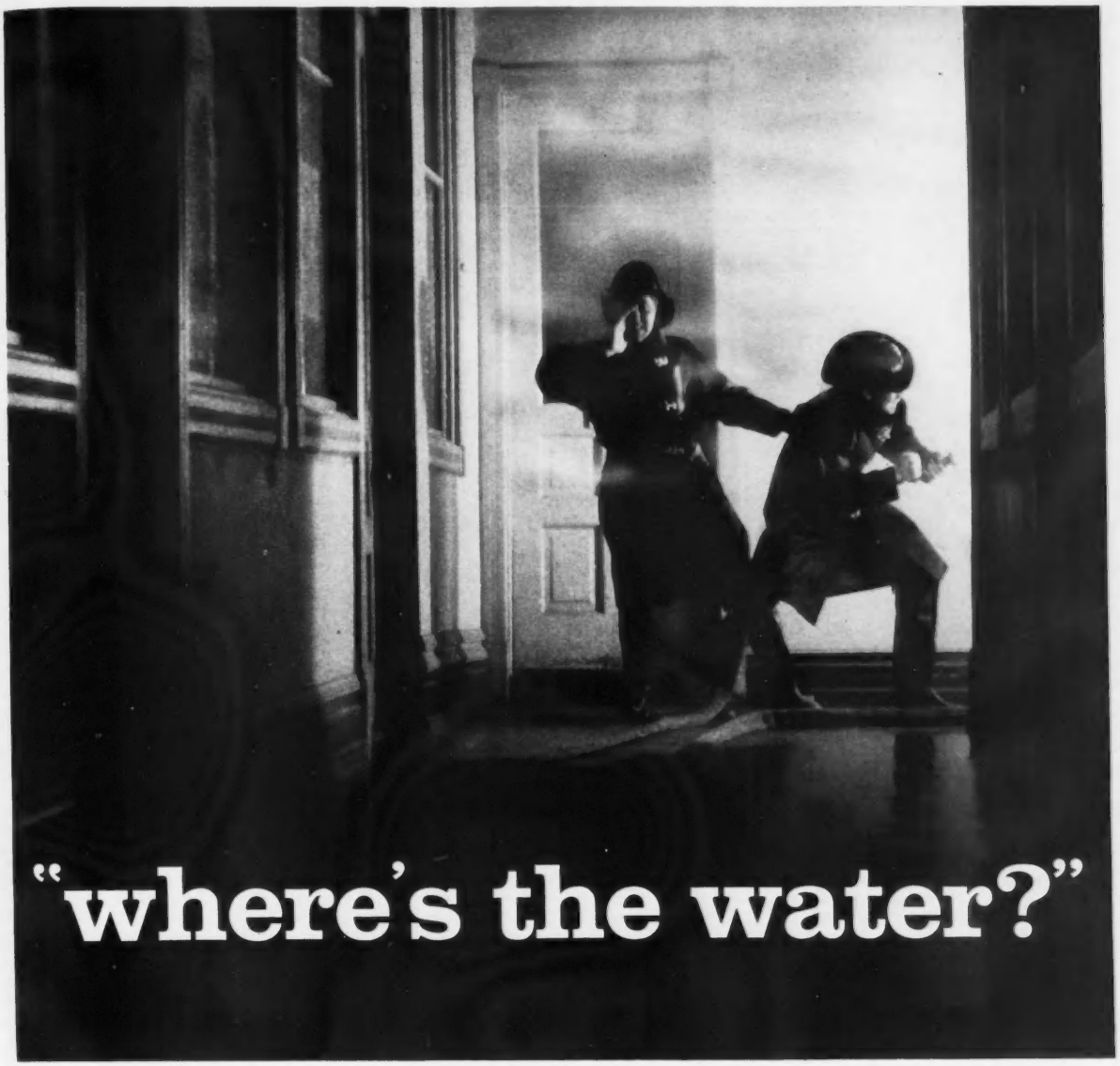
CHIEF Frank C. Kelly of the Jacksonville, Florida, Fire Department reports that his department has taken a new approach to the problem of false alarms. Such alarms are now termed "unlawful alarms" rather than false, and the psychological meaning of this term seems to be having the desired effect of notifying the public that the law is being broken when fire apparatus is summoned by such unnecessary alarms.

Fire Administration in Honolulu

CHIEF C. L. Bolz, who for several years has taught courses in fire department administration in the University of Southern California, is now on leave of absence, performing the same duty for the University of Hawaii, Honolulu, Territory of Hawaii.

Over 300 fire fighters are enrolled in the training program. It was established through the efforts of Chief Harold Pate of the Honolulu Fire Department who arranged to have Chief Bolz loaned from USC for this temporary duty. The administration program is coordinated by Dr. Edmund Spellacy, Dean of the College of General Studies, and George Joe, Personnel Assistant of the Fire Department.

Classes are held on alternate days each week so that firemen personnel may attend on their off-duty shift. Class sessions are two hours in duration and the program continues for the full semester or 16 class sessions. The majority of students come from the Honolulu Fire Department and a large number of personnel from Army and Naval fire brigades also participate.



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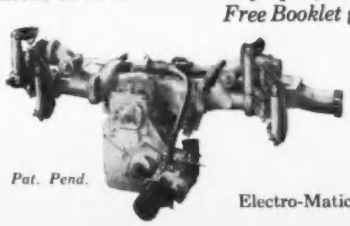
The *Electro-Matic* is the first fire pump to offer power operation for all major pump controls. You get into action faster, during those precious early minutes. You start pumping without lost motion. New Waterous *Electro-Matic* gives you push-button controls that reduce the chance of error and offer greater protection to personnel. Main pump is engaged at the flip of a switch; the powerful rotary-gear primer goes into action with the push of a button; "open" and "close" push-buttons unlock, reset and lock the discharge valves; a simple "volume-pressure" switch sets the transfer valve. And that's not all. The *Electro-Matic* is an entirely new pump in design. It weighs less, requires less space and can be mounted in a variety of methods to meet requirements of all modern chassis. All this plus the features that have made Waterous pumps famous such as horizontally-split, *two-piece* case and full ball-bearing construction.

Free Booklet gives complete details. Your copy by return mail. Send for it today.



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Electro-Matic Model CM, 1000 GPM, Class A. 500, 750 GPM, 2 or 3-stage models available.

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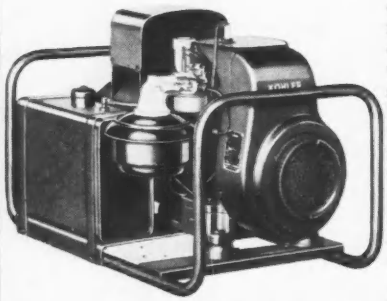
Portable power—top performance for rescue trucks, fire fighting tools, civil defense



Model 2.5M25, *2500 watts, 115 volt AC. Manual starting.*

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Smooth-running reliability has made Kohler electric plants the choice for rescue operations and fire fighting equipment the country over. Compact, portable models are used for floodlights, resuscitators, smoke eradicators, portable iron lungs, and power tools. The 2500 watt model shown has 4 receptacles, pilot light, carrying frame. Rubber-tired hand cart available. Other sizes, 500 watts to 50 KW, include stand-by models to maintain sirens, alarm signals, communications, during power failures.

For civil defense, Kohler plants operate floodlights, sound amplifiers, power tools, X-ray units for mobile hospitals. Larger sizes for air-raid sirens. Stand-by models for panic or evacuation centers. Write for folder 9-F.

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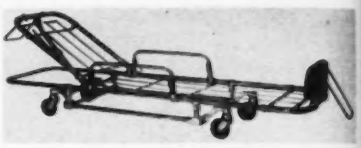
Manufacturers' Announcements

Electric Power Plants

A colorful, illustrated 8½ by 4-in. 20-page booklet has been published by D. W. Onan & Sons, Inc., Minneapolis 14, Minnesota. As shown on the cover page above it is a special issue that describes portable and standby electric plants which are being used by fire departments, ranging from 2500 watt to 10 kilowatt capacity. Photos show how the departments have installed this equipment on trucks or in fire stations. Full description is given of each power plant. Copies of the booklet may be obtained by writing to the Company at the above address.



Emergency Cot

A new ambulance and emergency cot is now being produced by Washington Products Company, 238 S. Fayette Street, Washington C.H., Ohio. The Model 21-L cot is only 8¼ inches high, is made of polished aluminum alloy tubing and castings, has trigger release side rails and an adjustable back rest with a 9-position squeeze lock adjustment. Write to the manufacturer for complete information.

New Officers for FEMA

Walter E. Morgan, Jr., industrial sales manager for Walter Kidde & Company, was elected president of the Fire Equipment Manufacturers' Association at FEMA's annual meeting in New York City, March 19.

Other officers elected were first vice president, A. D. Symonds, treasurer of W. D. Allen Manufacturing Company; second vice president, Harold A. Strain, sales manager, fire protection equipment, American LaFrance Corporation; and treasurer, Paul Nurkiewicz, vice president, Stop-Fire, Inc.

In addition to elected officers the Board of Directors of FEMA include: E. H. Hansen, president, Elkhart Brass Manufacturing Company, Inc.; George F. Clark, vice president in charge of sales, The General Detroit Corporation; and W. E. Tromanhauser, vice president and general sales manager, Pyrene — C-O-Two Division, The Fyr-Fyter Company.